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A LONGITUDINAL ANALYSES OF MILITARY RECRUIT  
ATTRITION: THE FIRST 25 MONTHS

Stuart A. Youngblood  
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This report was prepared under the Navy All-Volunteer Manpower R & D  
program of the Office of Naval Research under Contract N000-76-C-0938.

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February, 1980  
TR-11

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SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM															
1. REPORT NUMBER TR-117	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER															
4. TITLE (and Subtitle) A Longitudinal Analysis of Military Recruit Attrition: The First 25 Months.		5. TYPE OF REPORT & PERIOD COVERED Technical Report															
6. AUTHOR(s) Stuart A. Youngblood, James E. Laughlin, William H. Mobley, Bruce M. Meglino		7. PERFORMING ORG. REPORT NUMBER 13															
8. PERFORMING ORGANIZATION NAME AND ADDRESS Center for Management & Organizational Research College of Business Administration University of South Carolina, Columbia, SC 29208		9. CONTRACT OR GRANT NUMBER(s) N00014-76-C-0938															
10. CONTROLLING OFFICE NAME AND ADDRESS Organizational Effectiveness Research (Code 452) Office of Naval Research Arlington, VA 22217		11. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS NR 170-819															
12. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) 12 99		13. SECURITY CLASS. (of this report) Unclassified															
14. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited																	
15. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)																	
16. SUPPLEMENTARY NOTES Supported by Office of Naval Research Manpower R & D Program.																	
17. KEY WORDS (Continue on reverse side if necessary and identify by block number) <table border="0"> <tr> <td>Expectations</td> <td>Analysis of Variance</td> <td>Behavioral Intentions</td> </tr> <tr> <td>Attrition</td> <td>Leadership</td> <td>Roles</td> </tr> <tr> <td>Attitudes</td> <td>Group Climate</td> <td>Values</td> </tr> <tr> <td>Recruit Training</td> <td>Job Content</td> <td>Education</td> </tr> <tr> <td>Repeated Measures</td> <td>Longitudinal</td> <td>Race</td> </tr> </table>			Expectations	Analysis of Variance	Behavioral Intentions	Attrition	Leadership	Roles	Attitudes	Group Climate	Values	Recruit Training	Job Content	Education	Repeated Measures	Longitudinal	Race
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18. ABSTRACT (Continue on reverse side if necessary and identify by block number) This report summarizes pre-recruit training, post recruit training, advanced training, and duty station measures on the 1976 longitudinal cohort of Marine Corps enlistees. Significant differences between stayers and leavers and significant changes over the first 25 months of the enlistment are identified. Implications are discussed.																	

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### ACKNOWLEDGEMENTS

The Center for Management and Organizational Research is grateful to many individuals for their contribution to our ongoing research efforts. A number have provided assistance which is truly outstanding and deserves special mention.

#### At Marine Corps Headquarters:

Lt. Col. W. Osgood, Lt. Col. J. Creel, Major R. Hockaday, Major D. Kuhn, Capt. W. Sevon, and Mr. S. Gorman, Major M. Patrow.

#### At Parris Island:

Col. R. D. White, Col. P. A. Wickwire, Lt. Col. G. Gill, Major J. Hays, Capt. R. Eluk, and 1 Lt. F. Cappello.

#### At San Diego:

Lt. Col. J. Hopkins, Lt. Col. A. Whittelsey, Major Snyder, Capt. Donohoe, and Capt. A. Bandoli.

#### At University of South Carolina:

Dr. Robert Baker, Dr. Stan Fryer, Linda Grubbs, Connie Cale, Patricia Bearden, and Wally Shealy.

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A LONGITUDINAL ANALYSIS OF MILITARY RECRUIT ATTRITION:  
THE FIRST 25 MONTHS

Management Summary

What is the purpose of the study?

Earlier reports in this series have dealt with pre-training values, expectations, and intentions for a 1976 sample of Parris Island recruits (Mobley, Hand, Logan, & Baker, 1977); an analysis of recruit training attrition for this sample (Mobley, Hand, & Logan, 1977; Mobley, Hand, Baker, & Meglino, 1978); a cross sectional analysis of this sample at advanced training and initial duty station (Griffeth, Meglino, Youngblood, & Mobley, 1979); and an analysis of recruit training attrition across four different U.S. Marine Corps cohorts (Youngblood, Meglino, Mobley, & Moore, 1980). The present report focuses on attrition over a 25 month tracking period for a sample of male, Marine Corps recruits who enlisted in August of 1976. Two issues are addressed by this study; a) what changes in attitudes, expectations and intentions over time distinguish attrites from non-attrites, and b) what significant changes in the perceptions of the Marine Corps occur over time for both those who remained with or left the Marine Corps over the 25 month period studied?

How was the study conducted?

Recruits were asked to complete a survey after they arrived at Parris Island but before the actual start of recruit training (Phase I survey), at the end of recruit training (Phase II survey), near the end of advanced

training (Phase III survey), and after assignment to duty station (Phase IV survey). Phase III surveys were administered only to an east-coast subsample of the original 1976 tracking sample and were excluded from analyses for this report. The survey included measures of expectations, attraction for both the Marine and civilian roles, intentions, satisfaction, perceived job, workgroup, and leader characteristics, internal motivation and growth need strength. Demographic information was collected on individuals through the Marine Corps Recruit Accession Management System (RAMS) file. Four groups of Marines were identified for the analyses: 1) one group consisted of those individuals who stayed with the Marine Corps as of the 25th month of enlistment; 2) a second group consisted of those individuals who left the Marine Corps during their assignment to a duty station; 3) a third group consisted of those individuals who left after graduation from recruit training (during advanced training), but before assignment to a duty station; 4) and a fourth group that left the Marine Corps before completion of recruit training. Survey measures taken at phases I, II or IV permitted a comparison of these four groups on measures of expectations, attraction to either the Marine or civilian role, intentions, satisfaction, and organizational perception measures.

#### How do stayers differ from attrites?

Because surveys were collected at three different times over a 25 month interval, the question of whether stayers differ from attrites can be addressed at each of these three different survey administrations. Hence, three designs were employed to analyze the survey measures. To facilitate the summary of these findings, the results corresponding to each design will be discussed separately.

Design 1. Significant differences among the stayer and three attrite groups on Phase I measures were observed on: a) the job variables of skill variety, task significance, autonomy, and feedback from the job; b) the attractions to and proficiency of the work group; c) expected leader structure; d) expected overall security, growth, interpersonal, and leader satisfaction; e) individual level measures of growth need strength and internal motivation; f) three out of four expectation measures; g) three out of five role attraction indexes; and h) the intention to complete and intention to reenlist measures. For the majority of these measures the immediate leavers (attrites during recruit training) differed significantly from either the stayers or the latter two attrite groups. The measures that best differentiated immediate leaver group from the other groups were: expected satisfaction, chances of completing first term, intention to complete first term, and the attraction measure Marine Role Force.

Design 2. For design 2 interest focused on measures that distinguished stayers from attrites who left after completion of recruit training. Survey measures that best distinguished stayers from leavers were satisfaction with pay, security, growth, and leader and expectation of completing the first term of enlistment. In general the attrite group that left between graduation from recruit training but prior to assignment to duty station showed a decline on these measures, while the stayers displayed an increase on these measures between phases I and II. The major finding of design 2 analyses, however, was the general improvement in attitudes toward the Marine Corps upon graduation from recruit training, regardless of whether an individual subsequently left or stayed with the Marine Corps. This noticeable improvement may have reflected a bias, however, due to the euphoria experienced by recruits upon completion of recruit training.

Design 3. In this design emphasis was placed on distinguishing stayers from attrites who left during or after assignment to duty station. Three measures distinguished stayers from leavers: attraction to the work group, proficiency of the work group, and intention to complete the first term of enlistment. The major source of differences between the stayers and leavers was the noticeably greater decline on each of these three measures between phases II and IV for the attrite group. Overall, both stayers and leavers experienced a general improvement in attitudes toward and perceptions of the Marine Corps between initial entry into the Marine Corps and graduation from recruit training, but then experienced a general decline in attitudes and perceptions between graduation from recruit training and assignment to duty station.

What implications can be drawn from this study?

The difference between stayers' and leavers' initial attitudes toward the Marine Corps as well as differences in attitudes that develop over time between stayers and leavers have both selection and training implications. Our results suggest that intention and attitudinal measures, in addition to traditionally used demographic variables (e.g., age, education, mental score, marital status), would be useful for identifying high risk recruits who are unlikely to successfully complete recruit training. One strategy for policy planners would be to incorporate this information into current recruitment and selection procedures such that high risk individuals would be excluded from the Marine Corps in the future. Alternatively, given that a high risk individual has been identified, initial, alternative, low stress training, coaching, or counseling could be tailored to those individuals to increase their probability of retention. At some point, however, the policy planner

has to determine the costs relative to the benefits for investing in additional training to salvage high risk recruits. One, relatively, low cost training intervention is the use of realistic previews, which have been discussed and evaluated in this series (see Horner, et al., 1979, Technical Report 9).

A second implication of these results is the observed change in attitudes toward Marine Corps that occur over time for both stayers and leavers. Our results suggest, however, that recruits who leave the Marine Corps after completion of recruit training display a decline in satisfaction with the Marine Corps as well as a drop in their intentions to remain in the Marine Corps prior to leaving. Again this information could be of diagnostic value for identification of high risk recruits such that alternative training, coaching, or counseling could be directed at these individuals. It is important to note that stayers in our sample also experienced a decline in satisfaction with the Marine Corps and intention to complete active obligated service. This decline, however, was not nearly as dramatic for stayers as it was for leavers. These changes in attitudes and intentions over the 25 month period lead us to speculate that recruits who successfully complete recruit training experience a euphoria and perhaps unrealistic expectations about future experiences and opportunities available to them upon completion of advanced training and assignment to duty stations. An important question that remains is what is the source of this decline in attitudes and intentions experienced by Marines after graduation from recruit training? The final report in this series will address this question in further detail and suggest some policy implications for recruitment, selection, and training activities of the U.S. Marine Corps.

## A LONGITUDINAL ANALYSIS OF MILITARY RECRUIT ATTRITION: THE FIRST 25 MONTHS

### Introduction

This report summarizes the results of a longitudinal analysis of attrition among a 1976 sample of U.S. Marine Corps recruits. Specifically, this report examines the relationship between changes in attitudes, expectations, and intentions over a 25 month period and attrition among U.S. Marine Corps enlistees during this period. Earlier reports in this series have dealt with pre-training values, expectations, and intentions for a 1976 sample of Parris Island recruits (Mobley, Hand, Logan, & Baker, 1977); an analysis of recruit training attrition for this sample (Mobley, Hand, & Logan, 1977; Mobley, Hand, Baker, & Meglino, 1978); a cross sectional analysis of this sample at advanced training and initial duty station (Griffeth, Meglino, Youngblood, & Mobley, 1979); and an analysis of recruit training attrition across four different U.S. Marine Corps cohorts (Youngblood, Meglino, Mobley, & Moore, 1980). The present report analyzes correlates of attrition over the first 25 months of the enlistment and changes in attitudes, expectations, intentions, and perceptions over this 25 month period. Since support for this study was obtained through developmental funds, this report is primarily directed toward the manpower community. Subsequent manuscripts, currently in process, will address concerns of the basic research community.

### Problem

Attrition among first term enlisted military personnel is a problem of justifiable concern. Declining numbers of citizens in the primary recruiting age groups, an economy providing alternative employment opportunities,

and increasingly technological sophisticated manpower requirements serve to under-score the nature of the problem. (See e.g., Matthews, 1977; Wharton EFA, 1979). Pre-end of active obligated service (EAOS) attrition places additional burden on the recruiting function which is already dealing with a diminished labor market. Pre-EAOS attrition represents a significant cost to the military (see e.g., Huck and Midlam, 1977) and a potentially significant cost to individuals who attrite (leave the organization). This does not imply that all attrition is bad. Attrition of certain individuals at certain times may be desirable from cost-effectiveness, unit-effectiveness, and individual perspectives.

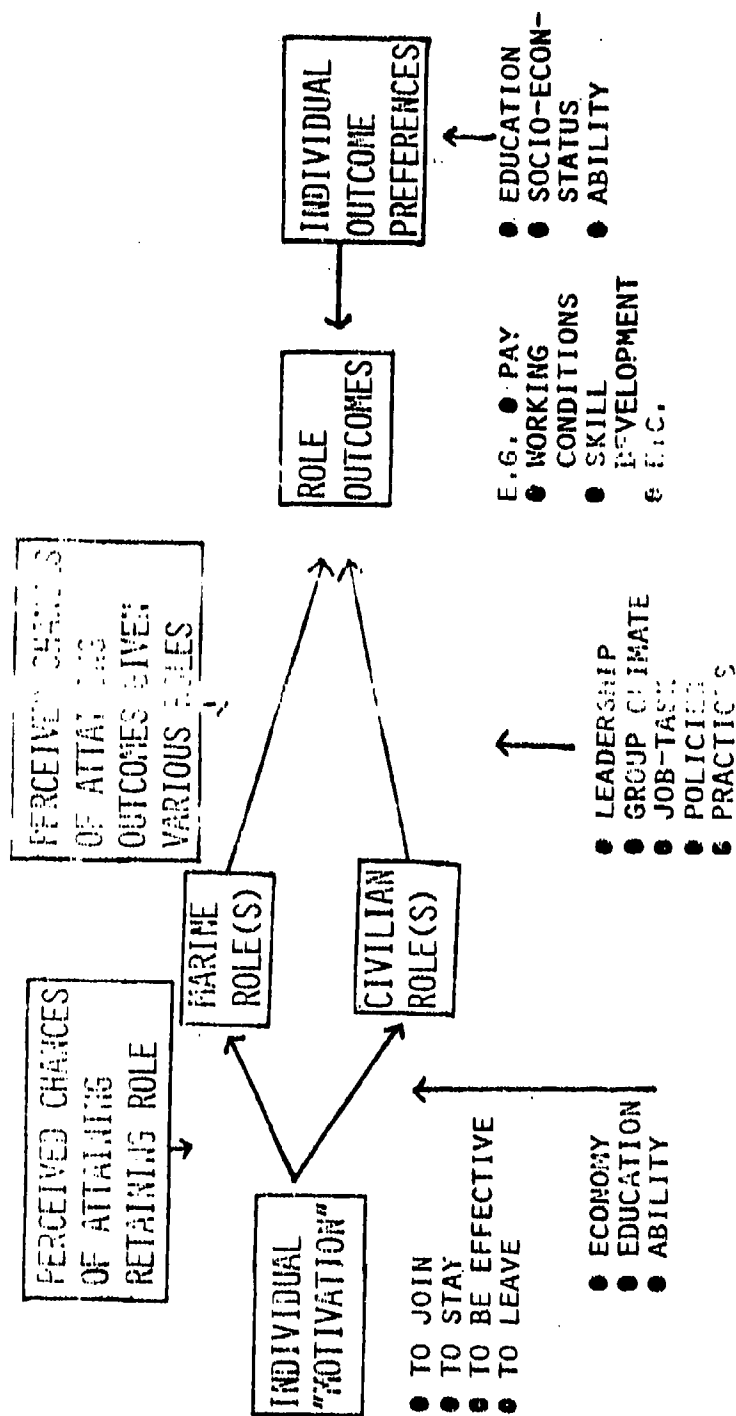
Research on military attrition reviewed elsewhere (Hand, Griffeth, and Mobley, 1977) indicated that military attrition research: has placed relatively more emphasis on reenlistment than pre-EAOS attrition; has placed relatively more emphasis on individual variables (e.g., education, mental grade, etc.) than on organizational variables; has infrequently analyzed the possible joint or interactive contribution to attrition of individual and organizational variables; has infrequently utilized longitudinal designs; and has infrequently used experimental designs. Also, it should be noted that the shift to the volunteer concept raises issues of generalizability of pre-1973 research.

The present research program seeks to assess the contribution of individual and organizational variables to pre-EAOS attrition using multivariate analyses, a longitudinal design, and an enlisted sample selected after the 1973 shift to an all volunteer military.

#### General Model

The general model serving as a basis for this study is a role choice model (see Figure 1). This model is a variant of the generalized expect-

FIGURE 1  
A GENERALIZED MODEL OF THE  
ROLE ATTRACTION



tancy model of organizational behavior (Vroom, 1964; Campbell, Dunnette, Lawler, and Weick, 1970; Dachler and Mobley, 1973; Lawler, 1973). For reviews of the expectancy model, see Locke (1975) and Mitchell (1974). See Graen (1976) for a discussion of role processes, and Wiskoff (1977) for a multinational review of military career expectation research.

The role choice model used here addresses the following kinds of questions. Why do individuals choose a military role (in the present case an enlisted Marine Corps role) as opposed to a civilian role? Why do individuals choose to engage in effective role behavior (in the present case behavior which will not lead to pre-EAOS discharge)? Why do individuals choose to reenlist or not reenlist?

The model suggests that role choice can, in part, be understood and predicted by knowledge of:

- a) The value individuals place on various role outcomes or consequences, e.g., pay, learning new skills, travel, etc.;
- b) the individual's perceived expectancy that a given role will or will not lead to these various outcomes or consequences; i.e., role-outcome expectancy;
- c) the individual's expectancy regarding being able to attain the role, i.e., role expectancy, e.g., perceived chances of finding an acceptable civilian role or perceived chances of being a "successful" Marine.

As will be described in the measures sections of this report, these variables can be combined in various ways to generate, for each individual, role attraction indexes for both civilian and Marine roles. The individual variables and the various composite role attraction indexes can then be evaluated as correlates of attrition.

Since the model is a choice model, it is important to assess the

individual's perceptions of both the Marine role and alternative (civilian) roles. (See Schneider, 1976 for a discussion of this important point.) An individual's withdrawal from the Marine Corps may be related to more than simply his/her perception and evaluation of the desirability and availability of alternatives.

Individual level variables such as education, age, mental grade, etc., have been shown to be related to pre-EAOS attrition (Matthews, 1977; Lockman, 1975; Sands, 1976). In the present research program, such individual level variables as age, education, mental grade, and marital status are analyzed in terms of their relation to: values, expectancies, and role attraction; changes in values, expectancies, and role attraction; perceived organizational variables; and to attrition either directly or in combination with other individual and organizational variables.

Based in part on the Mobley, Griffeth, Hand, and Meglino (1979), Hand, et al. (1977), and Porter and Steers (1973) reviews of variables related to withdrawal (attrition) behavior, the study includes measures of leadership, job content, and group climate. These organizational variables, as perceived by the individual, are assessed in terms of their direct relationship to attrition and to the various components of the role choice model.

It is assumed that outcome values, role-outcome expectancies, and role expectancies are learned and are modified by experience. One advantage of the longitudinal design is that it affords the opportunity to track the learning-socialization process.

Summarizing the basic role model:

- a) It is a choice model which considers perceptions and evaluations of both Marine roles and alternative civilian roles;
- b) it considers both individual and organizational variables;

- c) combined with a longitudinal design, it permits assessment of the learning-socialization process.

It is believed that use of this conceptual model will contribute not only to prediction of attrition from individual and organizational variables, but also to the understanding of the attrition process.

### The Present Report

As noted above the longitudinal design of the 1976 cohort sample provided a unique opportunity to track changes in attitudes, expectations, and intentions over a 25 month period and the relationship of these changes to observed attrition from the U.S. Marine Corps. The results presented here are an extension of the pre-post training results reported in Mobley, et al. (1979) and Youngblood, et al. (1980). These previous reports were focused only on recruit training attrition during the first eleven weeks of military life. The present report analyzed attrition that occurred during recruit training, after recruit training but before assignment to duty station, and during or after assignment to duty station. Two research questions addressed by the longitudinal analyses reported here were:

- a) What changes in attitudes, expectations, and intentions over time distinguish attrites from non-attrites and;
- b) What significant changes in the perceptions of the Marine Corps occur over time for both those who remained or left the Marine Corps over the 25 month period studied?

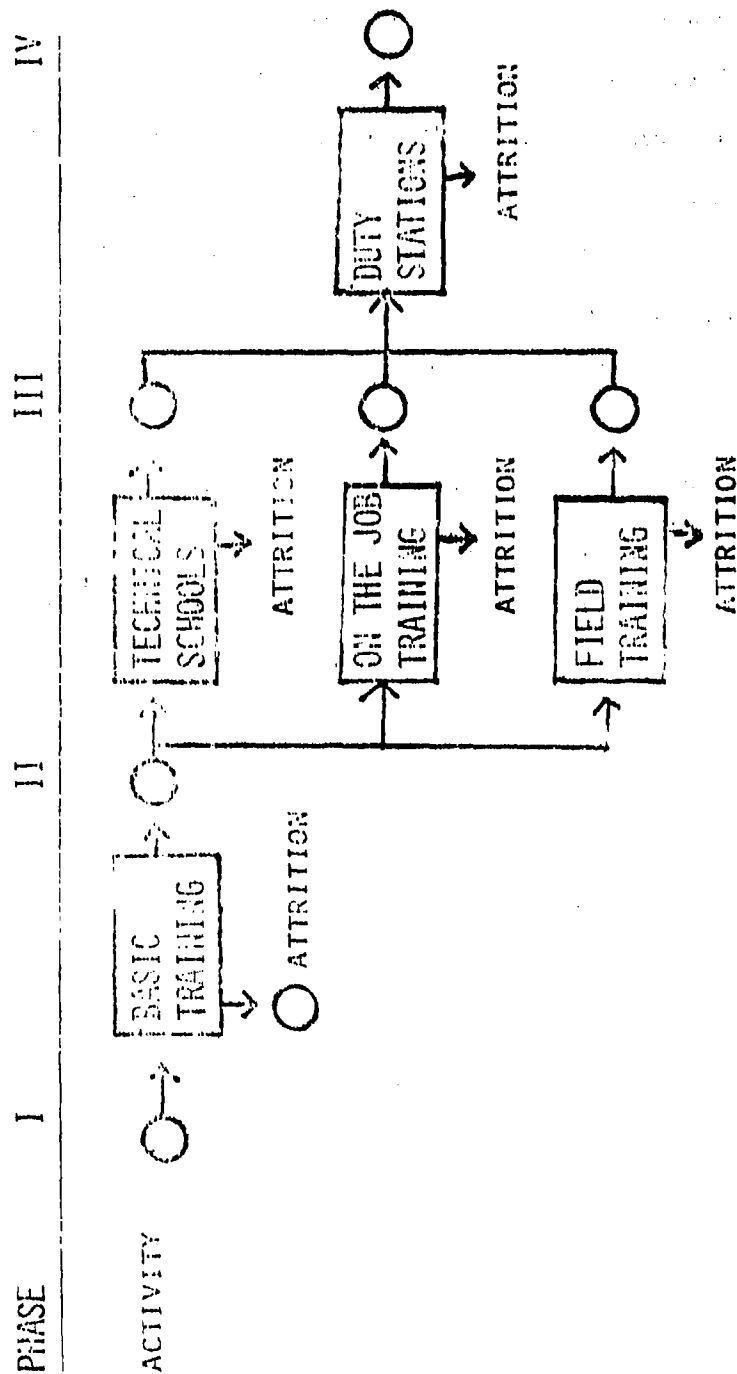
### Method

#### Basic Design

The basic longitudinal design is summarized in Figure 2. Survey measures were administered at the beginning of recruit training (Phase I Survey), again

FIGURE 2

BASIC LONGITUDINAL DESIGN



○ - ADMINISTRATION OF SURVEY INSTRUMENT

at the end of recruit training (Phase II Survey), to recruit training attrites (Phase II Attrite Survey), near the end of advanced training (Phase III Survey), and after assignment to duty station (Phase IV Survey). Earlier technical reports (Mobley, et al., 1978; Youngblood, et al., 1980) have discussed phase I to phase II survey responses for recruit training graduates and attrites and are not discussed here. Phase III surveys were administered only to an east coast subsample of the original 1976 tracking sample and are excluded from analyses reported here.

Three basic designs were employed to analyze the survey data collected at phases I, II, and IV from the 1976 tracking sample. Four groups of Marines were identified for the between group classification factor for each of the three designs. The four groups were:

- a) the stayers through phase IV (approximately 25 months),
- b) the immediate attrite group that left before completion of basic training,
- c) the second attrite group that left after basic training but before assignment to a duty station and,
- d) the third attrite group that left after assignment to a duty station.

Attrition data were collected at approximately the 25th month of service for the 1976 tracking sample. It is conceivable that the stayer group contained some Marines who would attrite prior to the end of active obligated service (EAOS). A subsequent updated attrition tape collected at the conclusion of the 1976 cohort's first term enlistment has been obtained and will be the subject of a future report. This tape will permit not only an accurate identification of attrites during the entire enlistment period but also identification of those Marines who elected to reenlist.

Table 1 provides an outline of the three analysis of variance designs

TABLE 1  
THREE ANALYSIS OF VARIANCE DESIGNS

		<u>DESIGN 1</u>			
		<u>N</u>	<u>PHASE:</u>	<u>I</u>	<u>II</u> <u>IV</u>
GROUP:		1142	Stayer	✓	
		32	Attrite 3	✓	
		76	Attrite 2	✓	
		111	Attrite 1	✓	

		<u>DESIGN 2</u>			
		<u>N</u>	<u>PHASE:</u>	<u>I</u>	<u>II</u> <u>IV</u>
GROUP:		998	Stayer	✓	✓
		32	Attrite 3	✓	✓
		72	Attrite 2	✓	✓

		<u>DESIGN 3</u>			
		<u>N</u>	<u>PHASE:</u>	<u>I</u>	<u>II</u> <u>IV</u>
GROUP:		489	Stayer	✓	✓      ✓
		32	Attrite 3	✓	✓      ✓

✓ = survey completed at this phase

N = number of observations

Attrite 1 = attrites prior to completion of recruit training

Attrite 2 = attrites after basic training but prior to duty station assignment

Attrite 3 = attrites during or after duty station assignment through 25 months of the enlistment.

employed for the present report. The first design is a simple one way analysis of variance design that permits a comparison across the stayer and attrite groups on the pretraining survey measures (Phase I). Design 2 is a 3 X 2 analysis of variance with repeated measures on the second factor. Design 3 is a 2 X 3 analysis of variance design with repeated measures on the second factor. The number of observations available for each design are also reported in Table 1. Only individuals with complete survey responses for a given design were included in the analysis. Some attrites were omitted from the analyses reported here due to conflicting information obtained from demographic data tapes which did not permit an accurate identification of the Marine's status or time of attrition. An updated attrition tape, however, has been received and a future report will provide a complete analysis for this sample over the entire first term enlistment. The results reported here may be considered conservative insofar as the attrite groups of the repeated measures designs are small relative to the stayer group. The power of the statistical tests should be improved upon reanalysis with the updated tape due to an increase in observations for the attrite groups.

### Sample

The original 1976 longitudinal (tracking) sample is composed of 1,520 male, nonreserve, first term enlisted personnel who were matched with the RAMS demographic tape and provided consistent phase I survey responses. The three designs, reported in Table 1 consist of subsamples of 1,361, 1102, and 521 observations respectively. To be included for analysis in any one of these three designs an observation had to meet the consistency check for all survey phases included in the specific design, have complete survey responses, and be accurately identified regarding attrition status as of the 25th month of enlistment. Table 2 summarizes the demographic status of the four groups

TABLE 2  
DEMOGRAPHIC STATUS OF LONGITUDINAL SAMPLE

Variable	Stayers		Attrite		Group 1		Group 2		Group 3	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Education <sup>a</sup> (yrs.)	11.80	.68	11.44	1.02	11.42	.93	11.56	1.08		
Race (% Caucasian)	79.00	-	79.00	-	82.00	-	78.00	-		
Marital Status (% married)	3.00	-	5.00	-	7.00	-	6.00	-		
Mental (AFQT)	62.41	19.34	59.03	18.39	62.00	17.74	59.03	17.25		
Age <sup>a</sup>	18.79	1.37	19.15	1.92	19.35	2.20	18.90	2.04		

<sup>a</sup>One way analysis of variance revealed significant differences among the stayer and attrite groups at the  $p < .01$  level.

Stayers = first term enlisted Marines as of 25 months completed service.

Attrite Group 1 = first term enlisted Marines who attrited before completion of recruit training.

Attrite Group 2 = first term enlisted Marines who attrited after recruit training but prior to duty station.

Attrite Group 3 = first term enlisted Marines who attrited after arrival at duty station.

used in the analysis of variance designs. Significant differences among the four groups were observed on the education and age variables. Stayers were more likely to have completed high school and were younger than attrites.

### Measures

The measures used in this study are summarized in Figure 3. The individual level variables of age, mental score, education, race, marital status, and number of dependents were collected from the RAMS computer file.

The component measures of the role choice model were collected via survey. These components include the following:

- a) Enlisted personnel were presented a list of 50 role outcomes and asked to rate them on a +2 to -2 scale of desirability - undesirability. The role outcomes, generated from previous research, interviews, and pilot tests, included such things as "learning career skills," "separation from family," "responsibility," etc. The term "outcome" refers to rewards, costs, and conditions possibly associated with a job or role.
- b) Role-outcome expectancies: Marine: for each of the 50 role outcomes, enlisted personnel were asked to rate, on a scale of 0 to 1.0, their chances of attaining that outcome by being a Marine.
- c) Role-outcome expectancies: Civilian: for each of the 50 role outcomes, enlisted personnel were asked to rate, on a scale of 0 to 1.0, their chances of attaining that outcome by being in a civilian job.
- d) Role-expectancy: Marine: enlisted personnel were asked to rate their chances of successfully completing their first term enlistment on a scale of 0 to 1.0.
- e) Role-expectancy: Civilian: enlisted personnel were asked to rate their chances of finding an acceptable civilian job at the present time if that were their goal, on a scale of 0 to 1.0.

Based on these component ratings, several composite index variables were generated for each individual.

- f) Role attraction: Marine: is the sum of the cross-products of the desirability ratings of the 50 role outcomes and Marine role-outcome expectancy ratings.

FIGURE 3  
MEASURES

INDIVIDUAL	ORGANIZATIONAL	CRITERIA
<ul style="list-style-type: none"> <li>● AGE</li> <li>● MENTAL GRADE</li> <li>● EDUCATION</li> <li>● RACE</li> <li>● MARITAL STATUS</li> <li>● ROLE ATTRACTION-</li> <li>● MARINE</li> <li>● ROLE ATTRACTION-</li> <li>● CIVILIAN</li> </ul>	<ul style="list-style-type: none"> <li>● LEADERSHIP (LBDQ)               <ul style="list-style-type: none"> <li>- CONSIDERATION</li> <li>- STRUCTURE</li> </ul> </li> <li>● GROUP               <ul style="list-style-type: none"> <li>- ATTRACTION</li> <li>- PROFICIENCY</li> </ul> </li> <li>● JOB (JDS)               <ul style="list-style-type: none"> <li>- SKILL VARIETY</li> <li>- TASK SIGNIFICANCE</li> <li>- FEEDBACK</li> <li>- PLUS 7 OTHER DIMENSIONS</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● INTENTIONS               <ul style="list-style-type: none"> <li>- EAOS</li> <li>- RE-ENLISTMENT</li> </ul> </li> <li>● PRE-EAOS ATTRITION               <ul style="list-style-type: none"> <li>- ADMINISTRATIVE REASONS</li> <li>- SELF-REPORT REASONS</li> </ul> </li> <li>● PERFORMANCE               <ul style="list-style-type: none"> <li>- SELF-REPORT</li> <li>- MASTER FILE</li> <li>- INDIVIDUAL RECRUIT TRAINING PERFORMANCE</li> </ul> </li> </ul>

- g) Role attraction: Civilian: is the sum of the cross-products of the desirability ratings of the 50 role outcome and civilian role-outcome expectancy ratings.
- h) Role Force: Marine: is the Marine role attraction index above weighted by expectancy of successfully completing the first term enlistment.
- i) Role Force: Civilian: is the civilian role attraction index above, weighted by expectancy of finding an acceptable civilian job.
- j) Net Role Force: is Marine role force minus civilian role force.

The organizational level variables, as perceived by enlisted personnel, were assessed with standardized survey measures. The Leader Behavior Description Questionnaire (Stogdill and Coons, 1957) assesses perceived leader "Consideration" and "Initiating Structure." Two group sociometric measures, attraction and proficiency (Libo, 1953), also were included. The short version of Job Diagnostic Survey (JDS) (Hackman and Oldham, 1974, 1975) was also used. The JDS assesses various dimensions of the perceived job content, e.g., skill variety, task significance, feedback, task identity, task autonomy from the job. This measure also includes job satisfaction scales and individual level measures of internal motivation and growth need or the desire to obtain growth satisfaction from one's work. A complete list and definitions of the dimensions of the organizational measures is given in the Appendix of an earlier report (Mobley, et al., 1977).

In the phase I administration of the survey, respondents were instructed to respond to the leadership, group, and job content measures in terms of what they expected (since they had not yet been exposed to military life). Administration of phase II, III, and IV surveys called for a descriptive rather than expected response set.

Criteria data collected on all surveys included behavioral intentions to complete first term enlistment, behavioral intentions to reenlist, and performance goals. For attrites, self reported ratings of their reasons for attrition were

included. Criteria data collected from the Marine Corps Headquarters master file included administrative reasons for attrition and re-cycle information.

### Procedure

The survey measures were pilot tested twice: first using enlisted personnel assigned to the University of South Carolina NROTC unit and second, using a platoon of July, 1976 Parris Island recruits. Based on the pilot tests, instructions were clarified, ambiguous items were clarified or deleted, minimal variance items were deleted, and several new questions were added based on suggestions of pilot study subjects.

The phase I survey measures were administered as a part of administrative processing during the first few days after arrival at the recruit depot. The survey was administered by the University researchers to groups of four platoons at a time. Recruits were read the appropriate freedom of information passage (which was also included in the survey booklet); informed that participation was voluntary; and that individual responses were confidential. Survey responses were made on machine readable answer sheets. ID numbers were requested for the purpose of matching subsequent administrations of the survey and matching with the RAMS and master file. All officers, non-commissioned officers, and drill instructors remained out of the room during administration of the survey.

The phase II survey was administered during the week of graduation and in the same manner as the phase I survey. Re-cycled recruits who did not graduate with their original platoon were given the phase II survey on an individual basis during the week of their graduation if they graduated within four weeks after their original platoon. Attrites were given the phase II attrite survey while in the Casual Company in the few days before their separation. The phase IV survey was administered by mail. The same survey was

used for phases I, II, and IV, with the exception that the phase II attrite survey included additional questions on self-reported reasons for attrition.

### Results

Appendices 1 through 3 summarize the results of the one way analysis of variance design and the two repeated measures designs for each of the 30 variables corresponding to the measures of organizational perceptions, satisfaction, individual differences, expectations, role attraction, and intentions. In addition, Appendices 4 through 33 report the cell means and observations for each of the ANOVA designs corresponding to the 30 variables analyzed. As stated earlier, the purpose of the present report is twofold:

- a) to examine whether stayers can be distinguished from attrites on the above measures and,
- b) to identify differences in perceptions of the Marine Corps that develop over time that serve to distinguish stayers from attrites.

Since both the stayer and the three different attrite groups have been identified as a function of length of service, significant main effects found for the group factor for any of the three ANOVA designs will indicate which variables can distinguish among these four groups. For the repeated measures designs the group by time interaction also provides an indication of between group differences that develop over time. Finally, significant time main effects for each of the repeated measures designs provide an indication of changes in perceptions of the Marine Corps that develop over time which, in the absence of a group by time interaction, are characteristic of both stayers and attrites.

Because the number of variables analyzed were numerous and three different ANOVA designs were employed, the results are treated in three sections. In the first section results related to organizational perceptions are discussed.

Specific variables examined were perceptions of the job, the work group, and the leader. The second section focuses on measures of satisfaction with the military role and two individual difference measures: growth need strength and internal motivation. Changes in expectations, role attraction, and intentions are discussed in the third section.

### Organizational Variables

Three different aspects of the organization were assessed via the survey: the job, the work group, and the leader (see Appendix 1). For the one way ANOVA model, significant differences were found on seven of the eleven organizational variables. Stayers rated the job more favorably than immediate attrites (attrite group 1) on the job variables of skill variety, task significance, autonomy, and feedback from the job. Immediate attrites also perceived their leader to be lower on consideration and structure than the later attrite and stayer groups.

The repeated measures analyses of the eleven job, group, and leader variables yielded consistent time main effects only. For design 2 significant time effects were found for eight of these eleven organizational variables analyzed. In general both stayer and attrite groups perceived a significant decline on the job variables of skill variety, task significance, and dealing with others, but perceived a significant increase on the job variables of autonomy and feedback from others. At the end of basic training all groups perceived a significant increase in group proficiency and leader consideration and a significant decrease in leader structure from expected levels measures before basic training began.

For design 3 significant time effects were observed for five of the seven job variables: skill variety, task significance, autonomy, feedback from others, and dealing with others. No significant differences between the stayer group and attrite group 3 were found. In general, both stayers and attrites

perceived a significant increase in autonomy and feedback from the job through phases I, II, and IV. On the other hand, both stayers and attrites perceived a significant decrease in skill variety, feedback from others, and dealing with others through phases I, II, and IV.

Only one significant group by time interaction was observed for the seven job related measures; this interaction, for skill variety, is illustrated in Figure 4 and applies to design 3 only. Both the stayer and attrite groups perception of skill variety available in the job declined over phases I, II, and IV. For attrite group 3, however, the decline was more pronounced between phases II and IV than the observed decline for the stayer group.

The repeated measures analysis for the work group and leader variables across phases I and II and I, II, and IV, respectively, yielded consistent time effects. In general, both stayers and attrites perceived an increase in their attraction to the work group and the proficiency of the work between phases I and II, but between phases II and IV they perceived a decrease in these measures. A similar pattern was also observed for leader consideration. For leader structure, a decline was observed between phases I and II and then an even greater decline occurred between phases II and IV.

#### Satisfaction, Growth Need Strength, and Internal Motivation

Appendix 2 summarizes the ANOVA results for six job-facet satisfaction measures as well as two measures of individual differences, growth need strength and internal motivation. Because the trends for the six satisfaction measures were very similar only the overall satisfaction measure will be discussed. Figure 5 illustrates the means across the three phases observed for each of the four groups of stayers and attrites. Again, immediate attrites (attrite group 1) are easily distinguished from the other groups based on expected overall satisfaction measured prior to the start of basic training.

FIGURE 4

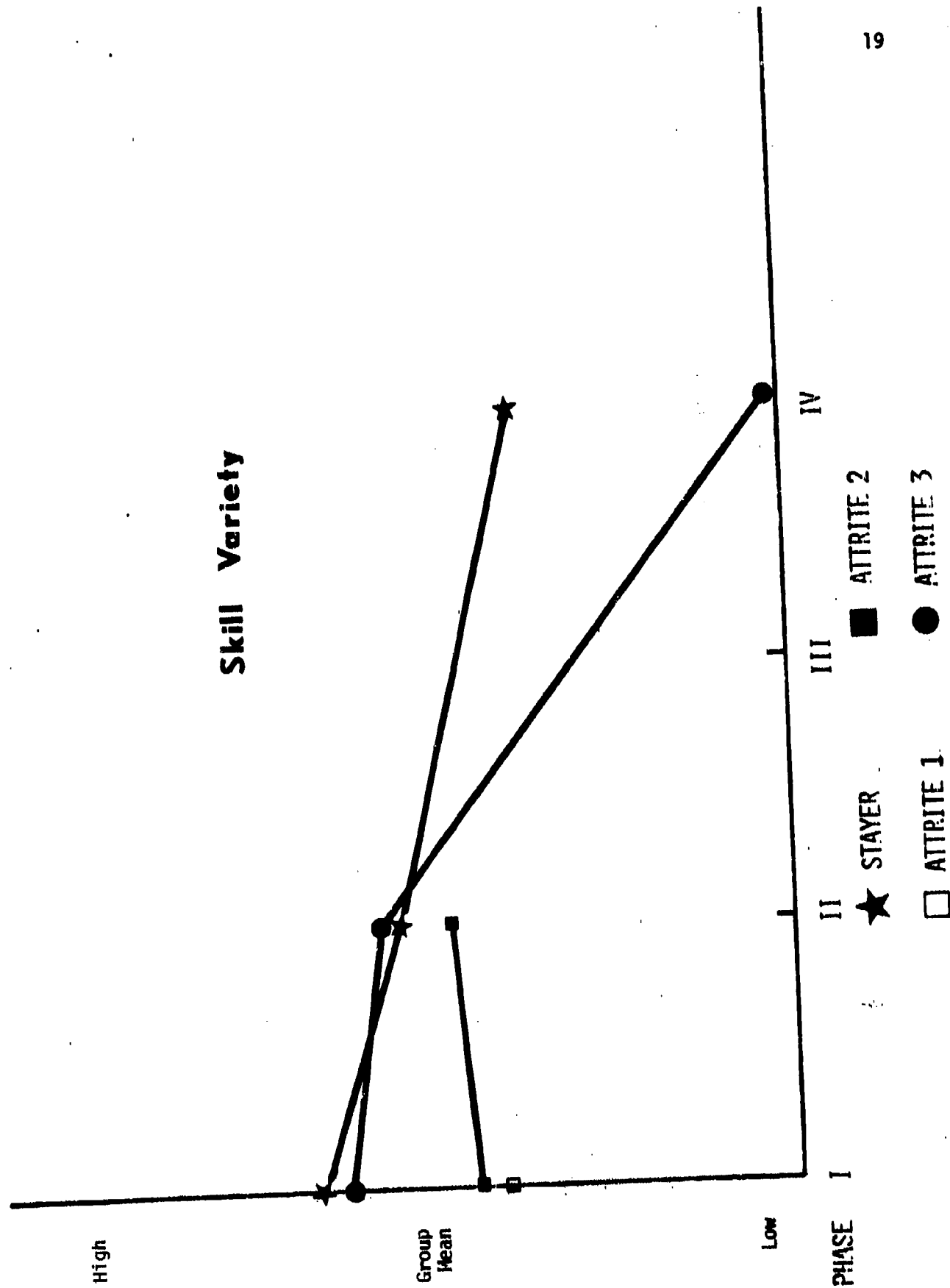
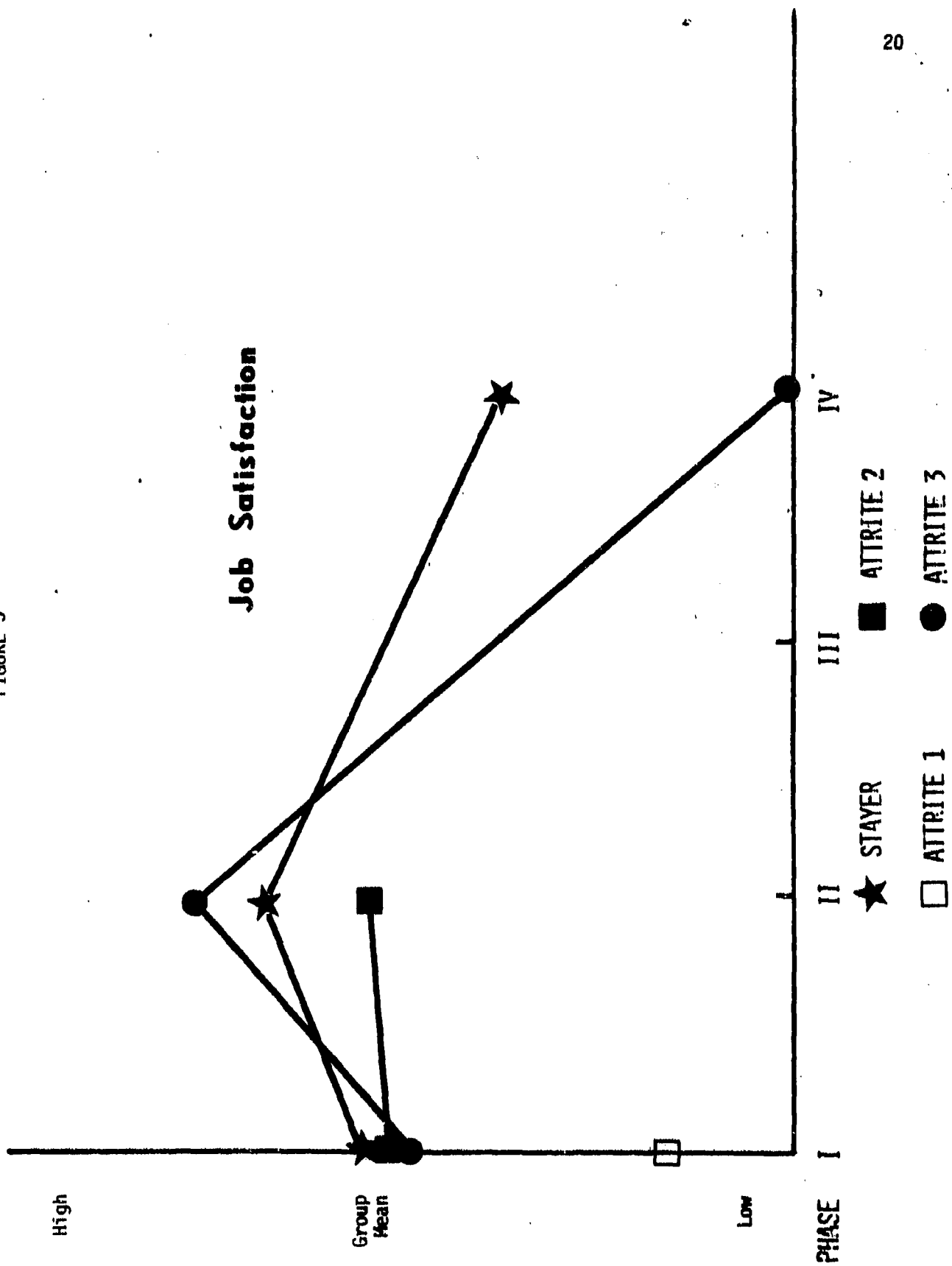


FIGURE 5



All groups exhibited an increase in perceived overall satisfaction at phase II. The increase, however, was more dramatic for attrite group 3 and the stayer group. By phase IV, though, the attrite group experienced a significantly greater decline in perceived overall satisfaction with the Marine Corps than the stayer group. Figure 5 reveals an attitudinal profile characteristic of several measures reported in appendices 1, 2, and 3. In general, there appears to be a spiking effect, observed at phase II that is most likely due to the euphoria associated with graduation from basic training. But by the time the Marines reach their duty stations, a significant decline in satisfaction levels is observed for both stayers and leavers. More importantly, the third attrite group's satisfaction level declines more rapidly between phases II and IV than it does for the stayer group.

Figures 6 and 7 illustrate the cell means for the analysis of the individual difference measures of growth need strength and internal motivation. In theory, one might expect these characteristics not to change in the short run, and to change only slowly over the long run. It is somewhat surprising, then, to note significant time effects for these two measures similar to the satisfaction measures. Note, again, that immediate attrites are distinguished from the other three groups on both these measures at phase I. Between phases I and II both the stayer and third attrite groups experience significant increases, while the second attrite group remains at the same level on the growth need strength measure and declines on the internal motivation measure. By phase IV, however, both the stayer and third attrite groups experience a significant decrement on both measures. The similarity of these trends to those of the satisfaction measures suggests that these individual difference measures may contain an attitudinal component.

#### Expectations, Role Attraction, and Intentions

Appendix 3 summarizes the ANOVA results for the four expectation measures, five role attraction indexes, and two intention measures. Similar to the

FIGURE 6

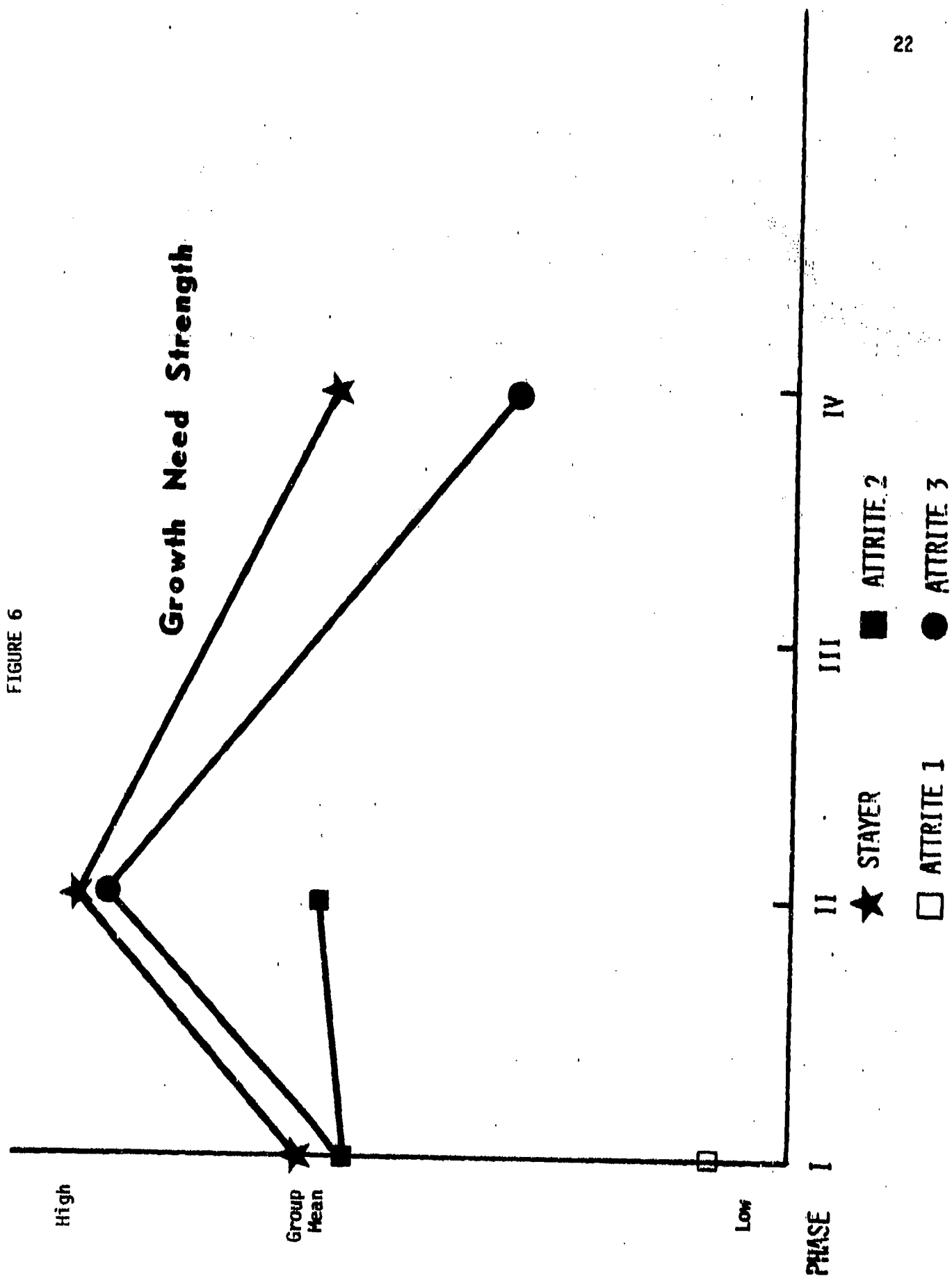
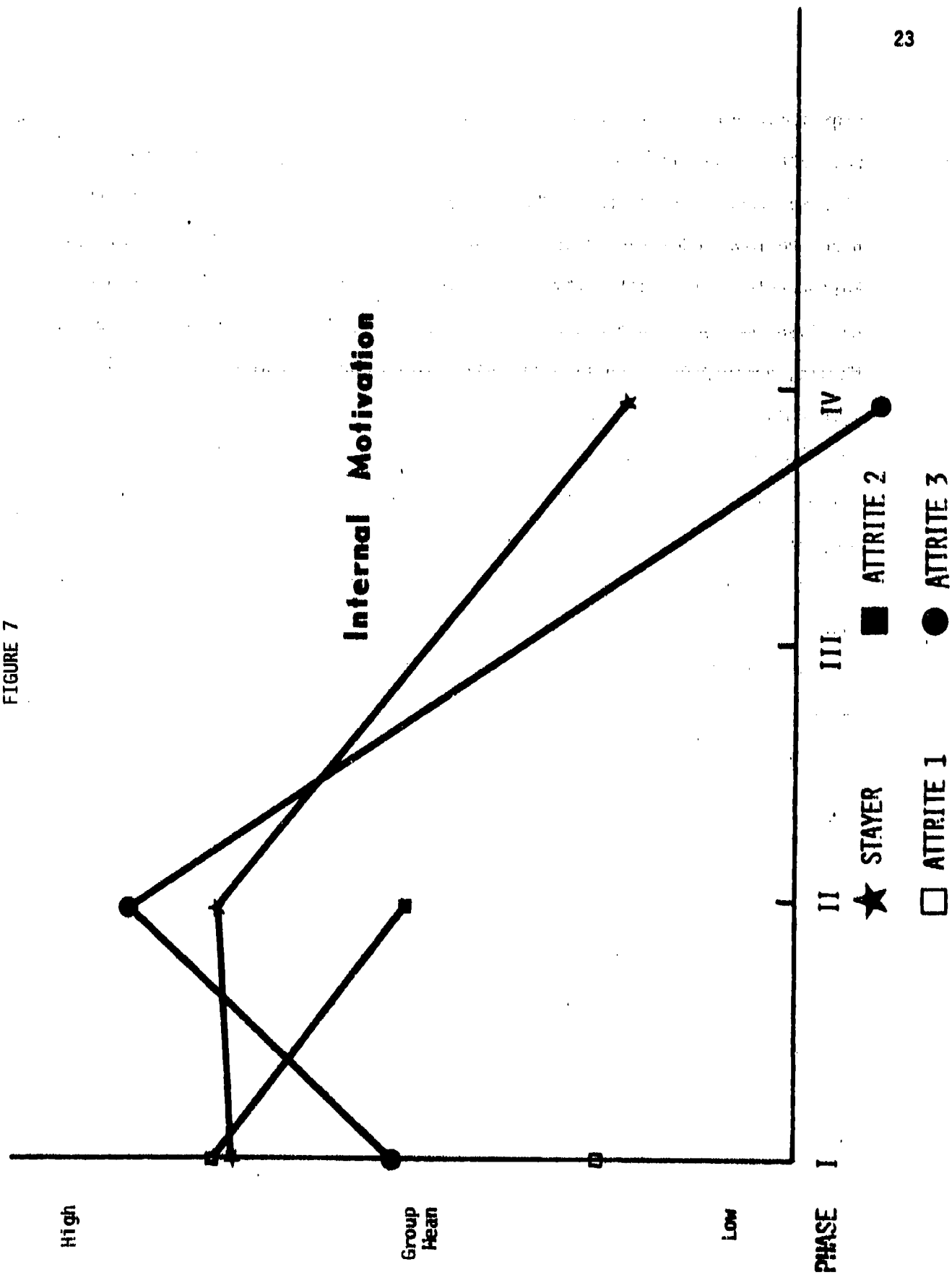


FIGURE 7



organizational, satisfaction and individual difference measures the expectation, role attraction and intentions measures clearly distinguish the immediate attrite group from the later attrite and stayer groups. Immediate attrites perceive lower odds that they will complete their first term enlistment, see Marine role as less attractive, perceive their chances of finding acceptable civilian employment higher, have a significantly lower net force to become a Marine, and express significantly lower intentions to complete their first term enlistment or to reenlist.

The repeated measures analysis of the expectation variables again reveal consistent time effects. For the "chances-of-completion-of-first-term" expectancy measure, stayers exhibit a marked increase from phase I to II while attrite groups 2 and 3 decline slightly or remain the same respectively. At phase IV, though, the third attrite group exhibits a significant drop over the stayer group in perceived chances of completion. Hence, this expectation measure provides insight into future behavior for those who attrite after assignment to duty station.

For the "chances of finding acceptable civilian employment" expectation measure, all groups experienced an increase over time. This effect can, in part, be attributed to maturation effects that influence all recruits. A significant group by time interaction for design 2, however, did reveal that attrite group 2 exhibited a greater increase between phases I and II than the stayer or attrite 3 groups. This measure may also serve as a precursor to actual behavior for the prediction of turnover among Marine Corps recruits. Two other expectation measures analyzed were indexes constructed by differencing the sum of the positive minus negative expectancies for the Marine and civilian roles, respectively. Significant time effects were observed for both measures for designs 2 and 3. A spiking effect at phase II was observed for the Marine expectation

index with a decline at phase IV for both attrite and stayer groups. For the civilian index an increase over phases I through IV was generally observed for all groups. These results taken with the role attraction results discussed below suggest that an acceptable civilian role relative to the Marine role is perceived as increasingly likely to be achieved as Marines progress from basic training to their duty stations.

The role attraction variables summarized in Appendix 3 are highly inter-correlated, therefore, two representative measures, Marine role force and civilian role force are discussed here. Figure 8 illustrates the cell means associated with the three ANOVA designs reported in Appendix 3. Once again the immediate attrite group is easily distinguished from the other three groups at phase I because attrite group 1 exhibits a significantly lower Marine role force. At phase II, Marine role force increases for all groups, but at a significantly greater rate for the stayer group. By phase IV, however, a substantial decline in Marine role force is observed for both stayer and attrite groups. Indeed, the force measure at phase IV is lower on average for both stayers and attrites than at phase I, the time of entry into the Marine Corps. The civilian role force (see Figure 9), similar to the expectation of finding acceptable civilian employment measure, increases with time for both stayer and attrite groups. These results clearly indicate that after graduation from basic training the Marine role decreases in attractiveness while the civilian role increases in attractiveness, whether or not the individual stays with the Marine Corps.

As the most probable precursor to actual behavior, intentions-to-complete enlistment and to reenlist provide diagnostic information about the attrition process observed for the present tracking sample. Figure 10 illustrates the cell means across the three phases and four groups used in the three ANOVA designs.

FIGURE 8

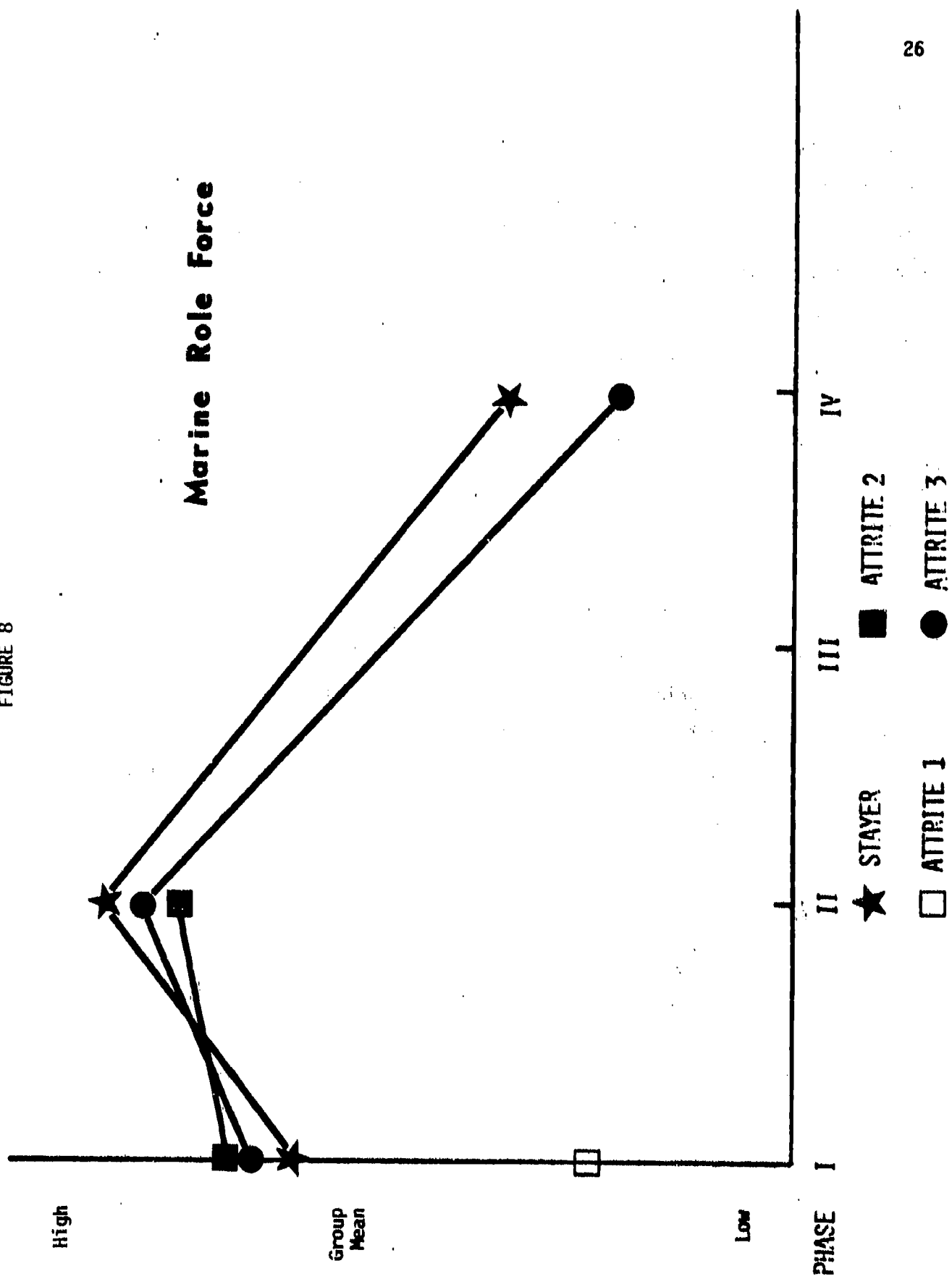
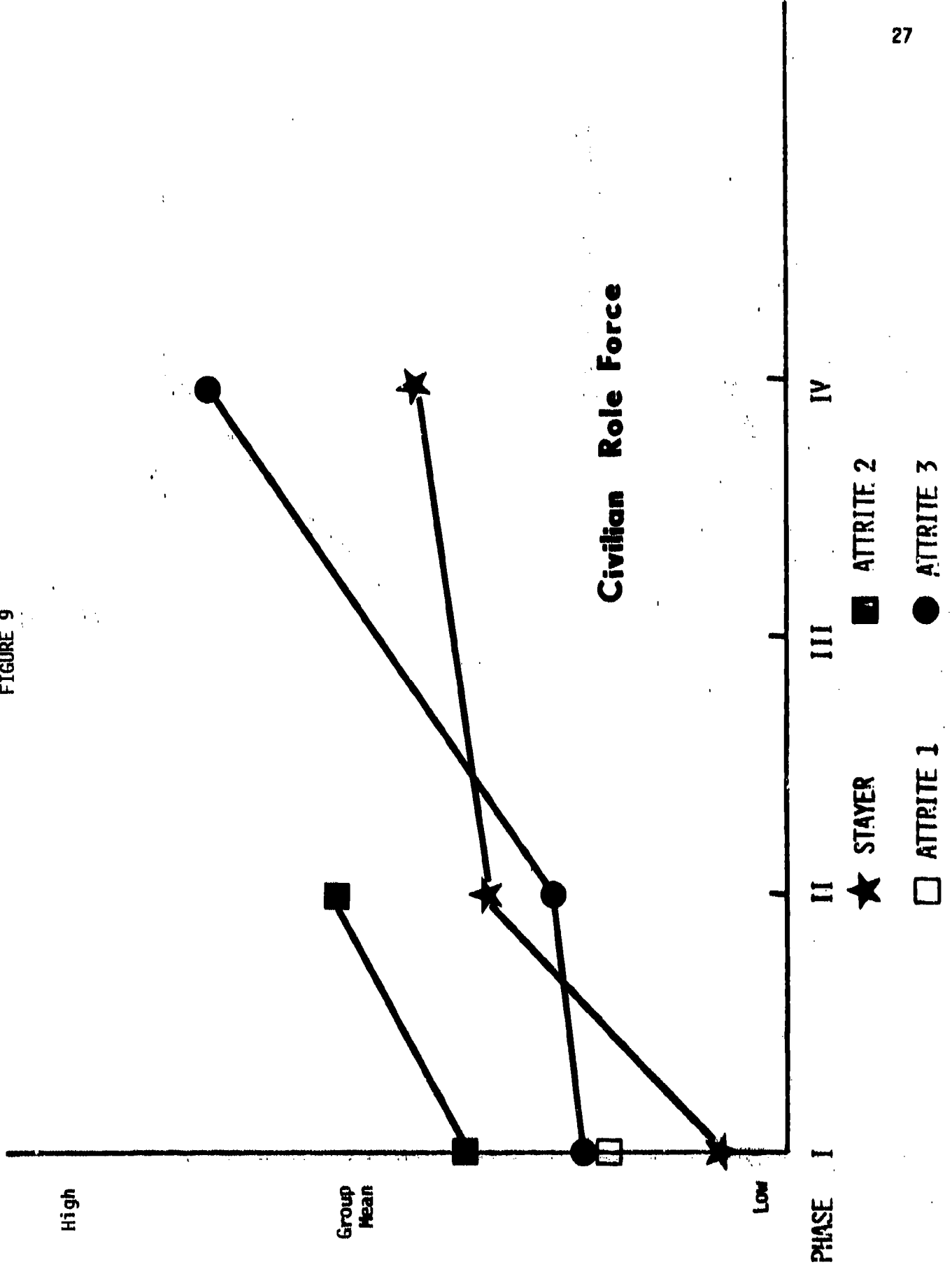
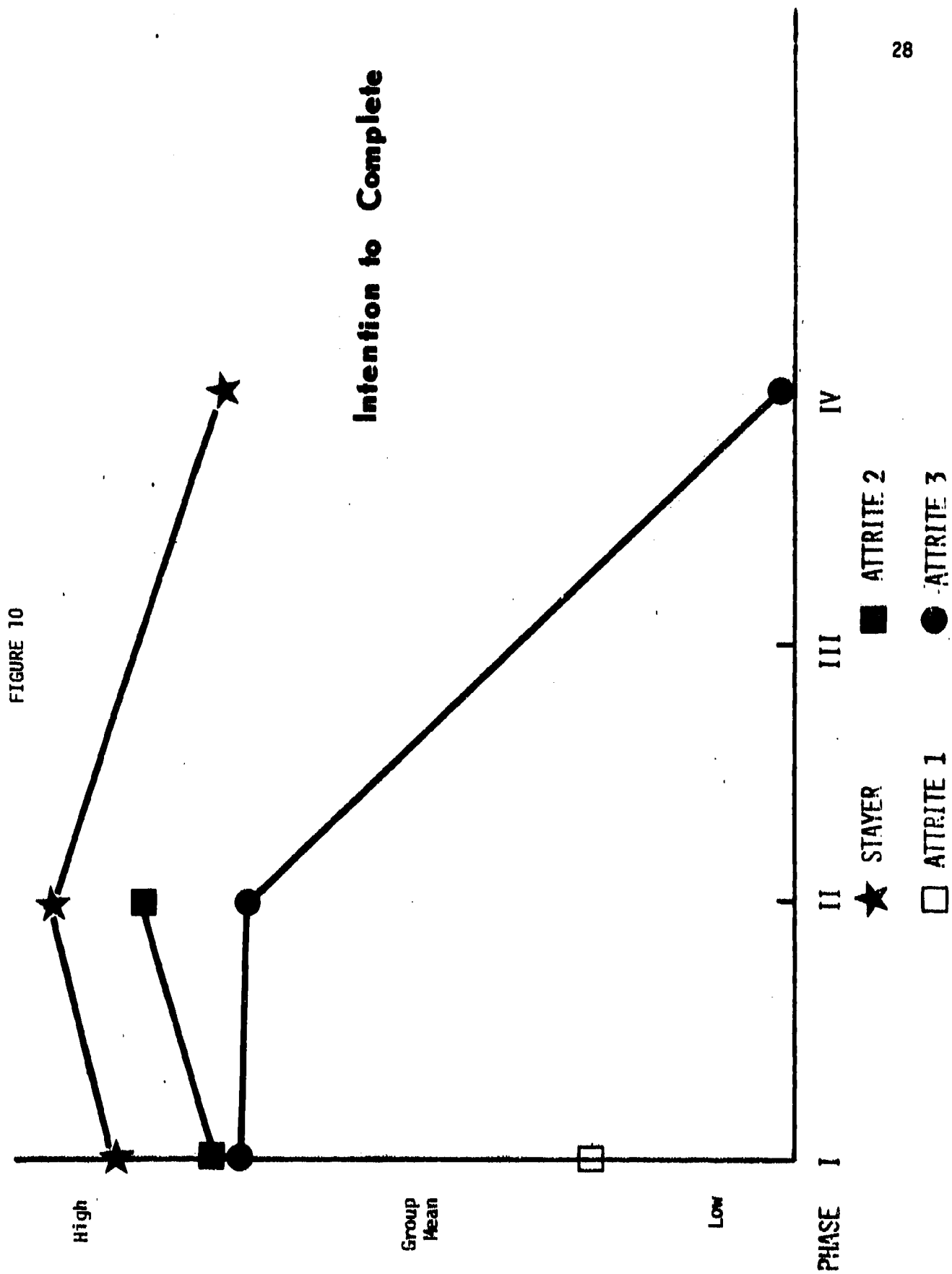


FIGURE 9





Again, immediate attrites, on average, have significantly lower intentions of completing their enlistment. Stayers, on the other hand, have consistently higher intentions of completing their enlistment over phases I, II, and IV. Interestingly, all groups experience an increase on intentions to complete from phase I to II, but by phase IV, the third attrite group exhibits a significantly greater decline on intention to complete than the stayer group. The intention to reenlist measure exhibits a similar pattern as the intention to complete measure except that no significant group main effects are observed for either design 2 or 3. For design 2, a spiking effect at phase II is observed such that both stayer and attrite groups express, on average, a greater intention to reenlist upon graduation from basic training. The third attrite group of design 3, however, experiences a significantly greater drop on intention to reenlist between phases II and IV than the stayer group. Both intention measures serve to distinguish immediate attrites and duty station attrites from stayers and, as such, may provide considerable diagnostic information for the identification of high risk recruits.

### Discussion

The results of this report have important implications for both selection and training strategies adopted by military manpower planners. First, one of the most consistent findings of this study is that Marine recruits who attrite within the first eleven weeks of Marine Corps life differ significantly from stayers even before the start of recruit training on expected satisfaction, intention, expectation, and job perception measures. One implication of these findings is that the Marine Corps could incorporate this information into existing selection rules and significantly reduce the number of high risk recruits inducted into the Marine Corps. Indeed, the present data lead one

to question why individuals who exhibit such poor attitudes, expectations, and intentions toward the Marine Corps are recruited to begin with. An alternative approach, however, may be to provide additional counseling, coaching, or training directed towards presenting realistic information about military life and teaching coping skills such that the initially poor attitudes, expectations, and intentions of these recruits are improved and hence, increase the likelihood that these recruits will successfully adopt to the Marine Corps.

A second consistent finding of the present report is the significant change in perceptions of the Marine Corps that occurred over the 25 month tracking period. Analyses conducted for data collected through advanced training and duty stations revealed a spiking effect; perceptions of the organization, satisfaction with various facets of military life, expectations and intentions about being a Marine improved for those Marines who successfully completed basic training. But as Marines progressed to advanced training and duty stations a general decline in satisfaction, intentions, expectations, and organizational perceptions occurred for both stayers and eventual attrites. From a diagnostic viewpoint the most consistent indicators of those who were likely to attrite between graduation from basic training and assignment to duty station are the six measures of job-facet satisfaction and the expectation and intention of completing the first term of enlistment. The most consistent indicators of those who leave the Marine Corps after assignment to duty station are the measures of intention to complete and intention to reenlist in the military.

An important question posed by these results is what factors contribute to the decrement in attitudes, expectations, and intentions observed over the

first 25 months of military life? One speculation is that the spike in attitudes observed at the completion of basic training is created by the intensity and stress of basic training. Consequently, future experiences pale in comparison to the events of basic training and thus lead to a psychological letdown. The ability to cope with this letdown may be related to pretraining characteristics or experiences of Marine recruits during training.

To the extent that a letdown is related to recruit experiences during training and duty station assignment a change in policy and practices may be warranted. It is conceivable that some military occupational specialties do not provide job outcomes desired by most recruits (e.g., skill variety, task significance, feedback from others). Job redesign strategies could be directed at these occupational specialties to enhance individuals' perceptions of their environment and satisfaction with the Marine Corps. It may well be that the decline in attitudes and perceptions toward the Marine Corps is due to the inability of individuals to qualify for or attain military occupational specialty that will lead to desired rewards. A future report will discuss results on this latter potential explanation for declining attitudes in more detail. Regardless of the explanation; whether pretraining differences or critical incidents that occur during and after training contribute to the long term decline in attitudes and perceptions, selection, training, and job redesign implications are suggested by the present results. A previous technical report in this series (TR-9, Horner, Mobley, and Meglino, 1979) has demonstrated the effectiveness of realistic military preview in reducing attrition. Given that this intervention occurred at the entry point into the organization and effectively reduced attrition, similar interventions may be effective in reducing attrition when such interventions are designed

to occur at major transition points during the enlistment (for example, prior to basic training, advanced training, or duty station assignment). Additionally, changes in the design of work could be undertaken, particularly for those occupational specialties that are perceived as unlikely to yield desired job outcomes (e.g., provide skills useful later in life, job that gives self-pride, job that is exciting, etc.). Changes in organizational practices may also be considered to minimize the occurrence of undesirable job outcomes (e.g., job that interferes with marriage-family plans, long separations from home and family, little job responsibility, etc.).

Future research directed at the evaluation of selection, training, and organizational and job design is warranted. Interventions designed to eliminate high risk recruits or alter the probabilities of retention need to be evaluated in terms of cost effectiveness, attitude change, and performance improvement. Our final report, due later this year, will suggest a number of potentially useful intervention strategies worthy of evaluation.

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# APPENDIX 1

## SUMMARY OF ANALYSIS OF VARIANCE RESULTS FOR ORGANIZATIONAL VARIABLES

Model	df <sup>a</sup>	JOB					WORK GROUP		LEADER			
		Skill Variety	Task Identity	Task Significance	Autonomy	Feedback Job	Feedback Others	Dealing With Others	Attraction	Proficiency	Consideration	Structure
Design 1 F <sub>group</sub>	3,1350	5.67***	.61	4.25*	2.24*	3.15**	1.35	.88	3.79***	3.27**	1.93	2.44*
Design 2 F <sub>group</sub>	2,1050	2.15	.15	3.78**	.53	.67	1.29	2.47*	1.93	1.87	.09	.07
F <sub>time</sub>	1,1050	12.37***	.01	32.16***	87.38***	.76	74.65***	50.22***	2.11	34.79***	335.86***	35.75***
F <sub>tot</sub>	2,1050	.68	.30	.27	1.18	.28	1.54	4.50**	1.11	.39	1.60	1.66
Design 3 F <sub>group</sub>	1,461	1.77	.50	.96	.61	.22	.11	.16	7.33***	3.62*	1.47	.09
F <sub>time</sub>	2,922	24.50***	1.00	11.57***	54.36***	.08	12.94***	25.59***	6.58***	2.97**	54.76***	241.19***
F <sub>tot</sub>	2,922	2.75*	1.19	1.84	.74	.51	2.29	.58	1.67	1.15	3.53**	.46

See p. 9 for explanation of model designs.

<sup>a</sup>Degrees of freedom varied somewhat due to missing values. The median denominator degrees of freedom are reported for appendices 1, 2, and 3.

\*p < .10

\*\*p < .05

\*\*\*p < .01

# APPENDIX 2

## SUMMARY OF ANALYSIS OF VARIANCE RESULTS FOR SATISFACTION, GROWTH NEED STRENGTH, AND INTERNAL MOTIVATION VARIABLES

Model	df	Overall	Pay	Security	Growth	Interpersonal	Leader	GROWTH NEED STRENGTH	INTERNAL MOTIVATION
Design 1 Fgroup	3,1246	8.49***	3.12**	6.31***	5.19***	4.71***	6.18**	4.69***	5.83***
Design 2 Fgroup	2,1096	1.08	1.51	3.10**	.90	1.01	1.05	1.08	.43
Ftime	1,1096	35.11***	7.66***	.28	10.31***	16.47***	62.06***	29.49***	.01
Fgxt	2,1096	1.10	3.16**	4.60***	2.57*	1.22	3.17**	1.05	1.96
Design 3 Fgroup	1,515	1.10	.01	1.95	.02	0	3.24*	.02	.23
Ftime	2,515	32.21***	108.77***	53.89***	51.83***	8.36***	31.84***	9.51***	46.24***
Fgxt	2,515	4.97***	1.18	6.03***	.86	1.54	.41	.72	1.24

See p. 9 for explanation of model designs.

\* $p < .10$

\*\* $p < .05$

\*\*\* $p < .01$

# APPENDIX 3

## SUMMARY OF ANALYSIS OF VARIANCE RESULTS FOR EXPECTATION, ROLE ATTRACTION, AND INTENTION VARIABLES

Model	df	EXPECTATIONS				ROLE ATTRACTION				INTENTIONS		
		Chances of Completion of First Term	Chances of Finding Acceptable Civilian Job	Marine Role: Sum of Positive-Negative Expectancies	Civilian Role: Sum of Positive-Negative Expectancies	Marine Role Attraction	Civilian Role Attraction	Marine Role Force	Civilian Role Force	Marine-Civilian Role Force	Intention to Complete	Intention to Reenlist
Design 1 F <sub>group</sub>	3,1246	18.60***	6.07***	16.74***	.79	7.23***	.68	12.50***	1.77	13.31***	19.93***	2.33*
Design 2 F <sub>group</sub>	2,1096	.35	3.14**	2.49*	.26	.17	.34	.01	1.27	.39	3.78**	.20
F <sub>time</sub>	1,1096	47.89***	15.91***	49.23***	11.59***	77.67***	29.56***	121.24***	50.36***	22.65***	8.47***	9.91***
F <sub>tot</sub>	2,1096	3.10**	.45	1.13	2.35*	2.08	2.15	2.67*	.26	.50	.22	.80
Design 3 F <sub>group</sub>	1,515	1.29	.42	1.19	.53	.53	.31	.99	.02	.16	13.78***	.43
F <sub>time</sub>	2,515	18.09***	46.02***	145.40***	6.93***	142.47***	12.58***	125.47***	14.43***	111.37***	13.47***	111.36***
F <sub>tot</sub>	2,515	3.63**	1.91	.33	1.12	.22	.60	.11	.94	1.24	5.67***	4.58**

See p. 9 for explanation of model designs.

\*p < .10

\*\*p < .05

\*\*\*p < .01

# APPENDIX 4

## CELL MEANS<sup>a</sup> ACROSS GROUPS AND PHASES FOR SKILL VARIETY

GROUP	PHASE		
	I	II	IV
STAYER	3.34 (1115)	3.22 (970)	3.02 (461)
ATTRITE 3	3.30 (31)	3.23 (30)	2.60 (29)
ATTRITE 2	3.09 (75)	3.13 (71)	
ATTRITE 1	3.05 (106)		

NOTE: Stayer = first term enlisted Marines as of 25 months completed service.

Attrite 3 = first term enlisted Marines who attrited during or after arrival at duty station.

Attrite 2 = first term enlisted Marines who attrited during advanced training.

Attrite 1 = first term enlisted Marines who attrited before completion of recruit training.

<sup>a</sup> Number of observations appears in parentheses below mean.

# APPENDIX 5

## CELL MEANS<sup>a</sup> ACROSS GROUPS AND PHASES FOR TASK IDENTITY

GROUP	PHASE		
	I	II	IV
STAYER	3.25 (1115)	3.26 (964)	3.32 (459)
ATTRITE 3	3.27 (31)	3.19 (31)	3.07 (30)
ATTRITE 2	3.32 (74)	3.26 (73)	
ATTRITE 1	3.17 (108)		

NOTE: Stayer = first term enlisted Marines as of 25 months completed service.

Attrite 3 = first term enlisted Marines who attrited during or after arrival at duty station.

Attrite 2 = first term enlisted Marines who attrited during advanced training.

Attrite 1 = first term enlisted Marines who attrited before completion of recruit training.

<sup>a</sup> Number of observations appears in parentheses below mean.

# APPENDIX 6

## CELL MEANS<sup>a</sup> ACROSS GROUPS AND PHASES FOR TASK SIGNIFICANCE

GROUP	PHASE		
	I	II	IV
STAYER	3.79 (1111)	3.64 (958)	3.71 (436)
ATTRITE 3	3.91 (32)	3.77 (29)	3.62 (27)
ATTRITE 2	3.63 (73)	3.44 (72)	
ATTRITE 1	3.52 (108)		

NOTE: Stayer = first term enlisted Marines as of 25 months completed service.

Attrite 3 = first term enlisted Marines who attrited during or after arrival at duty station.

Attrite 2 = first term enlisted Marines who attrited during advanced training.

Attrite 1 = first term enlisted Marines who attrited before completion of recruit training.

<sup>a</sup> Number of observations appears in parentheses below mean.

# APPENDIX 7

## CELL MEANS<sup>a</sup> ACROSS GROUPS AND PHASES FOR AUTONOMY

GROUP	PHASE		
	I	II	IV
STAYER	2.60 (1112)	2.86 (952)	3.07 (454)
ATTRITE 3	2.42 (32)	2.86 (31)	2.97 (30)
ATTRITE 2	2.49 (74)	2.87 (72)	
ATTRITE 1	2.39 (109)		

NOTE: Stayer = first term enlisted Marines as of 25 months completed service.

Attrite 3 = first term enlisted Marines who attrited during or after arrival at duty station.

Attrite 2 = first term enlisted Marines who attrited during advanced training.

Attrite 1 = first term enlisted Marines who attrited before completion of recruit training.

<sup>a</sup> Number of observations appears in parentheses below mean.

# APPENDIX 8

CELL MEANS<sup>a</sup> ACROSS GROUPS AND PHASES FOR  
FEEDBACK FROM JOB

GROUP	PHASE		
	I	II	IV
STAYER	3.46 (1106)	3.48 (953)	3.46 (457)
ATTRITE 3	3.31 (32)	3.41 (32)	3.51 (30)
ATTRITE 2	3.40 (75)	3.48 (74)	
ATTRITE 1	3.23 (108)		

NOTE: Stayer = first term enlisted Marines as of 25 months completed service.

Attrite 3 = first term enlisted Marines who attrited during or after arrival at duty station.

Attrite 2 = first term enlisted Marines who attrited during advanced training.

Attrite 1 = first term enlisted Marines who attrited before completion of recruit training.

<sup>a</sup> Number of observations appears in parentheses below mean.

# APPENDIX 9

## CELL MEANS<sup>a</sup> ACROSS GROUPS AND PHASES FOR FEEDBACK FROM OTHERS

GROUP	PHASE		
	I	II	IV
STAYER	3.11 (1110)	3.38 (953)	3.25 (460)
ATTRITE 3	2.93 (32)	3.48 (30)	3.29 (28)
ATTRITE 2	3.00 (73)	3.25 (72)	
ATTRITE 1	2.98 (109)		

NOTE: Stayer = first term enlisted Marines as of 25 months completed service.

Attrite 3 = first term enlisted Marines who attrited during or after arrival at duty station.

Attrite 2 = first term enlisted Marines who attrited during advanced training.

Attrite 1 = first term enlisted Marines who attrited before completion of recruit training.

<sup>a</sup> Number of observations appears in parentheses below mean.

# APPENDIX 10

## CELL MEANS<sup>a</sup> ACROSS GROUPS AND PHASES FOR DEALING WITH OTHERS

GROUP	PHASE		
	I	II	IV
STAYER	3.98 (1111)	3.84 (969)	3.70 (460)
ATTRITE 3	3.90 (32)	3.78 (30)	3.76 (29)
ATTRITE 2	3.99 (76)	3.56 (75)	
ATTRITE 1	3.87 (105)		

NOTE: Stayer = first term enlisted Marines as of 25 months completed service.

Attrite 3 = first term enlisted Marines who attrited during or after arrival at duty station.

Attrite 2 = first term enlisted Marines who attrited during advanced training.

Attrite 1 = first term enlisted Marines who attrited before completion of recruit training.

<sup>a</sup> Number of observations appears in parentheses below mean.

# APPENDIX 11

## CELL MEANS<sup>a</sup> ACROSS GROUPS AND PHASES FOR WORK GROUP: ATTRACTION

GROUP	PHASE		
	I	II	IV
STAYER	10.53 (1057)	10.69 (907)	10.29 (421)
ATTRITE 3	9.67 (27)	10.20 (25)	8.96 (25)
ATTRITE 2	10.83 (71)	10.44 (68)	
ATTRITE 1	10.14 (100)		

NOTE: Stayer = first term enlisted Marines as of 25 months completed service.

Attrite 3 = first term enlisted Marines who attrited during or after arrival at duty station.

Attrite 2 = first term enlisted Marines who attrited during advanced training.

Attrite 1 = first term enlisted Marines who attrited before completion of recruit training.

<sup>a</sup> Number of observations appears in parentheses below mean.

# APPENDIX 12

## CELL MEANS<sup>a</sup> ACROSS GROUPS AND PHASES FOR WORK GROUP: PROFICIENCY

GROUP	PHASE		
	I	II	IV
STAYER	6.81 (1054)	7.15 (907)	6.97 (424)
ATTRITE 3	6.30 (27)	6.84 (25)	6.54 (24)
ATTRITE 2	7.11 (70)	7.19 (67)	
ATTRITE 1	6.56 (102)		

NOTE: Stayer = first term enlisted Marines as of 25 months completed service.

Attrite 3 = first term enlisted Marines who attrited during or after arrival at duty station.

Attrite 2 = first term enlisted Marines who attrited during advanced training.

Attrite 1 = first term enlisted Marines who attrited before completion of recruit training.

<sup>a</sup> Number of observations appears in parentheses below mean.

# APPENDIX 13

## CELL MEANS<sup>a</sup> ACROSS GROUPS AND PHASES FOR LEADER CONSIDERATION

GROUP	PHASE		
	I	II	IV
STAYER	43.88 (1024)	50.72 (821)	49.65 (348)
ATTRITE 3	45.59 (27)	48.21 (24)	44.14 (22)
ATTRITE 2	44.61 (67)	50.94 (53)	
ATTRITE 1	41.50 (101)		

NOTE: Stayer = first term enlisted Marines as of 25 months completed service.

Attrite 3 = first term enlisted Marines who attrited during or after arrival at duty station.

Attrite 2 = first term enlisted Marines who attrited during advanced training.

Attrite 1 = first term enlisted Marines who attrited before completion of recruit training.

<sup>a</sup> Number of observations appears in parentheses below mean.

# APPENDIX 14

## CELL MEANS<sup>a</sup> ACROSS GROUPS AND PHASES FOR LEADER STRUCTURE

GROUP	PHASE		
	I	II	IV
STAYER	64.58 (1042)	63.52 (840)	55.38 (364)
ATTRITE 3	64.86 (28)	62.62 (26)	54.86 (22)
ATTRITE 2	65.25 (67)	62.40 (55)	
ATTRITE 1	62.67 (100)		

NOTE: Stayer = first term enlisted Marines as of 25 months completed service.

Attrite 3 = first term enlisted Marines who attrited during or after arrival at duty station.

Attrite 2 = first term enlisted Marines who attrited during advanced training.

Attrite 1 = first term enlisted Marines who attrited before completion of recruit training.

<sup>a</sup> Number of observations appears in parentheses below mean.

# APPENDIX 15

## CELL MEANS<sup>a</sup> ACROSS GROUPS AND PHASES FOR OVERALL SATISFACTION

GROUP	PHASE		
	I	II	IV
STAYER	3.46 (1112)	3.63 (955)	3.25 (433)
ATTRITE 3	3.41 (31)	3.73 (31)	2.78 (29)
ATTRITE 2	3.42 (73)	3.46 (71)	
ATTRITE 1	3.03 (107)		

NOTE: Stayer = first term enlisted Marines as of 25 months completed service.

Attrite 3 = first term enlisted Marines who attrited during or after arrival at duty station.

Attrite 2 = first term enlisted Marines who attrited during advanced training.

Attrite 1 = first term enlisted Marines who attrited before completion of recruit training.

<sup>a</sup> Number of observations appears in parentheses below mean.

# APPENDIX 16

## CELL MEANS<sup>a</sup> ACROSS GROUPS AND PHASES FOR PAY SATISFACTION

GROUP	PHASE		
	I	II	IV
STAYER	3.66 (1142)	3.76 (1009)	3.07 (477)
ATTRITE 3	3.64 (32)	3.88 (32)	2.89 (32)
ATTRITE 2	3.67 (76)	3.46 (76)	
ATTRITE 1	3.36 (111)		

NOTE: Stayer = first term enlisted Marines as of 25 months completed service.

Attrite 3 = first term enlisted Marines who attrited during or after arrival at duty station.

Attrite 2 = first term enlisted Marines who attrited during advanced training.

Attrite 1 = first term enlisted Marines who attrited before completion of recruit training.

<sup>a</sup> Number of observations appears in parentheses below mean.

# APPENDIX 17

## CELL MEANS<sup>a</sup> ACROSS GROUPS AND PHASES FOR SECURITY SATISFACTION

GROUP	PHASE		
	I	II	IV
STAYER	3.86 (1142)	3.89 (1009)	3.43 (475)
ATTRITE 3	3.78 (32)	4.02 (32)	2.86 (32)
ATTRITE 2	3.82 (76)	3.49 (76)	
ATTRITE 1	3.42 (111)		

NOTE: Stayer = first term enlisted Marines as of 25 months completed service.

Attrite 3 = first term enlisted Marines who attrited during or after arrival at duty station.

Attrite 2 = first term enlisted Marines who attrited during advanced training.

Attrite 1 = first term enlisted Marines who attrited before completion of recruit training.

<sup>a</sup> Number of observations appears in parentheses below mean.

# APPENDIX 18

## CELL MEANS<sup>a</sup> ACROSS GROUPS AND PHASES FOR GROWTH SATISFACTION

GROUP	PHASE		
	I	II	IV
STAYER	3.63 (1108)	3.71 (951)	3.32 (440)
ATTRITE 3	3.64 (32)	3.81 (29)	3.22 (28)
ATTRITE 2	3.67 (72)	3.53 (70)	
ATTRITE 1	3.35 (105)		

NOTE: Stayer = first term enlisted Marines as of 25 months completed service.

Attrite 3 = first term enlisted Marines who attrited during or after arrival at duty station.

Attrite 2 = first term enlisted Marines who attrited during advanced training.

Attrite 1 = first term enlisted Marines who attrited before completion of recruit training.

<sup>a</sup> Number of observations appears in parentheses below mean.

# APPENDIX 19

## CELL MEANS<sup>a</sup> ACROSS GROUPS AND PHASES FOR INTERPERSONAL SATISFACTION

GROUP	PHASE		
	I	II	IV
STAYER	3.64 (1115)	3.74 (967)	3.56 (445)
ATTRITE 3	3.61 (32)	3.90 (29)	3.42 (27)
ATTRITE 2	3.62 (71)	3.60 (66)	
ATTRITE 1	3.35 (109)		

NOTE: Stayer = first term enlisted Marines as of 25 months completed service.

Attrite 3 = first term enlisted Marines who attrited during or after arrival at duty station.

Attrite 2 = first term enlisted Marines who attrited during advanced training.

Attrite 1 = first term enlisted Marines who attrited before completion of recruit training.

<sup>a</sup> Number of observations appears in parentheses below mean.

# APPENDIX 20

## CELL MEANS<sup>a</sup> ACROSS GROUPS AND PHASES FOR LEADER SATISFACTION

GROUP	PHASE		
	I	II	IV
STAYER	3.48 (1114)	3.71 (963)	3.35 (450)
ATTRITE 3	3.33 (32)	3.56 (30)	3.02 (30)
ATTRITE 2	3.55 (73)	3.51 (73)	
ATTRITE 1	3.14 (107)		

NOTE: Stayer = first term enlisted Marines as of 25 months completed service.

Attrite 3 = first term enlisted Marines who attrited during or after arrival at duty station.

Attrite 2 = first term enlisted Marines who attrited during advanced training.

Attrite 1 = first term enlisted Marines who attrited before completion of recruit training.

<sup>a</sup> Number of observations appears in parentheses below mean.

# APPENDIX 21

## CELL MEANS<sup>a</sup> ACROSS GROUPS AND PHASES FOR GROWTH NEED STRENGTH

GROUP	PHASE		
	I	II	IV
STAYER	3.88 (1064)	4.06 (898)	3.86 (403)
ATTRITE 3	3.85 (28)	4.04 (25)	3.72 (25)
ATTRITE 2	3.85 (72)	3.87 (68)	
ATTRITE 1	3.56 (102)		

NOTE: Stayer = first term enlisted Marines as of 25 months completed service.

Attrite 3 = first term enlisted Marines who attrited during or after arrival at duty station.

Attrite 2 = first term enlisted Marines who attrited during advanced training.

Attrite 1 = first term enlisted Marines who attrited before completion of recruit training.

<sup>a</sup> Number of observations appears in parentheses below mean.

# APPENDIX 22

## CELL MEANS<sup>a</sup> ACROSS GROUPS AND PHASES FOR INTERNAL MOTIVATION

GROUP	PHASE		
	I	II	IV
STAYER	3.95 (1105)	3.96 (941)	3.64 (446)
ATTRITE 3	3.82 (30)	4.03 (28)	3.44 (27)
ATTRITE 2	3.96 (72)	3.81 (71)	
ATTRITE 1	3.66 (106)		

NOTE: Stayer = first term enlisted Marines as of 25 months completed service.

Attrite 3 = first term enlisted Marines who attrited during or after arrival at duty station.

Attrite 2 = first term enlisted Marines who attrited during advanced training.

Attrite 1 = first term enlisted Marines who attrited before completion of recruit training.

<sup>a</sup> Number of observations appears in parentheses below mean.

# APPENDIX 23

## CELL MEANS<sup>a</sup> ACROSS GROUPS AND PHASES FOR CHANCES OF COMPLETING FIRST TERM

GROUP	PHASE		
	I	II	IV
STAYER	.87 (1135)	.93 (998)	.87 (486)
ATTRITE 3	.92 (32)	.90 (31)	.78 (29)
ATTRITE 2	.91 (73)	.92 (72)	
ATTRITE 1	.72 (110)		

NOTE: Stayer = first term enlisted Marines as of 25 months completed service.

Attrite 3 = first term enlisted Marines who attrited during or after arrival at duty station.

Attrite 2 = first term enlisted Marines who attrited during advanced training.

Attrite 1 = first term enlisted Marines who attrited before completion of recruit training.

<sup>a</sup> Number of observations appears in parentheses below mean.

# APPENDIX 24

## CELL MEANS<sup>a</sup> ACROSS GROUPS AND PHASES FOR CHANCES OF FINDING ACCEPTABLE CIVILIAN JOB

GROUP	PHASE		
	I	II	IV
STAYER	.52 (1141)	.56 (1006)	.67 (487)
ATTRITE 3	.52 (32)	.52 (32)	.77 (30)
ATTRITE 2	.59 (73)	.65 (73)	
ATTRITE 1	.65 (109)		

NOTE: Stayer = first term enlisted Marines as of 25 months completed service.

Attrite 3 = first term enlisted Marines who attrited during or after arrival at duty station.

Attrite 2 = first term enlisted Marines who attrited during advanced training.

Attrite 1 = first term enlisted Marines who attrited before completion of recruit training.

<sup>a</sup> Number of observations appears in parentheses below mean.

# APPENDIX 25

CELL MEANS<sup>a</sup> ACROSS GROUPS AND PHASES FOR  
MARINE ROLE: SUM OF POSITIVE-NEGATIVE EXPECTANCIES

GROUP	PHASE		
	I	II	IV
STAYER	29.92 (1102)	31.71 (939)	23.60 (420)
ATTRITE 3	32.05 (29)	34.59 (27)	24.25 (22)
ATTRITE 2	29.61 (67)	29.98 (63)	
ATTRITE 1	25.29 (101)		

NOTE: Stayer = first term enlisted Marines as of 25 months completed service.

Attrite 3 = first term enlisted Marines who attrited during or after arrival at duty station.

Attrite 2 = first term enlisted Marines who attrited during advanced training.

Attrite 1 = first term enlisted Marines who attrited before completion of recruit training.

<sup>a</sup> Number of observations appears in parentheses below mean.

# APPENDIX 26

## CELL MEANS<sup>a</sup> ACROSS GROUPS AND PHASES FOR CIVILIAN ROLE: SUM OF POSITIVE-NEGATIVE EXPECTANCIES

GROUP	PHASE		
	I	II	IV
STAYER	22.61 (1077)	23.66 (905)	23.72 (394)
ATTRITE 3	23.07 (31)	25.58 (30)	26.29 (25)
ATTRITE 2	24.33 (69)	23.02 (64)	
ATTRITE 1	23.00 (101)		

NOTE: Stayer = first term enlisted Marines as of 25 months completed service.

Attrite 3 = first term enlisted Marines who attrited during or after arrival at duty station.

Attrite 2 = first term enlisted Marines who attrited during advanced training.

Attrite 1 = first term enlisted Marines who attrited before completion of recruit training.

<sup>a</sup> Number of observations appears in parentheses below mean.

# APPENDIX 27

## CELL MEANS<sup>a</sup> ACROSS GROUPS AND PHASES FOR MARINE ROLE ATTRACTION

GROUP	PHASE		
	I	II	IV
STAYER	39.27 (1096)	44.13 (925)	28.14 (410)
ATTRITE 3	39.58 (28)	44.08 (27)	24.17 (22)
ATTRITE 2	39.52 (67)	40.79 (63)	
ATTRITE 1	30.69 (98)		

NOTE: Stayer = first term enlisted Marines as of 25 months completed service.

Attrite 3 = first term enlisted Marines who attrited during or after arrival at duty station.

Attrite 2 = first term enlisted Marines who attrited during advanced training.

Attrite 1 = first term enlisted Marines who attrited before completion of recruit training.

<sup>a</sup> Number of observations appears in parentheses below mean.

# APPENDIX 28

## CELL MEANS<sup>a</sup> ACROSS GROUPS AND PHASES FOR CIVILIAN ROLE ATTRACTION

GROUP	PHASE		
	I	II	IV
STAYER	29.43 (1071)	32.54 (894)	28.88 (383)
ATTRITE 3	28.68 (31)	31.08 (30)	29.37 (25)
ATTRITE 2	32.03 (67)	31.07 (61)	
ATTRITE 1	28.48 (99)		

NOTE: Stayer = first term enlisted Marines as of 25 months completed service.

Attrite 3 = first term enlisted Marines who attrited during or after arrival at duty station.

Attrite 2 = first term enlisted Marines who attrited during advanced training.

Attrite 1 = first term enlisted Marines who attrited before completion of recruit training.

<sup>a</sup> Number of observations appears in parentheses below mean.

# APPENDIX 29

## CELL MEANS<sup>a</sup> ACROSS GROUPS AND PHASES FOR MARINE ROLE FORCE

GROUP	PHASE		
	I	II	IV
STAYER	34.94 (1090)	41.84 (918)	25.99 (407)
ATTRITE 3	36.51 (28)	40.28 (26)	21.93 (20)
ATTRITE 2	36.92 (65)	39.22 (61)	
ATTRITE 1	23.19 (98)		

NOTE: Stayer = first term enlisted Marines as of 25 months completed service.

Attrite 3 = first term enlisted Marines who attrited during or after arrival at duty station.

Attrite 2 = first term enlisted Marines who attrited during advanced training.

Attrite 1 = first term enlisted Marines who attrited before completion of recruit training.

<sup>a</sup> Number of observations appears in parentheses below mean.

# APPENDIX 30

## CELL MEANS<sup>a</sup> ACROSS GROUPS AND PHASES FOR CIVILIAN ROLE FORCE

GROUP	<u>PHASE</u>		
	I	II	IV
STAYER	16.08 (1071)	19.67 (893)	20.73 (381)
ATTRITE 3	17.91 (31)	18.58 (30)	23.96 (25)
ATTRITE 2	20.04 (67)	21.94 (61)	
ATTRITE 1	17.90 (99)		

NOTE: Stayer = first term enlisted Marines as of 25 months completed service.

Attrite 3 = first term enlisted Marines who attrited during or after arrival at duty station.

Attrite 2 = first term enlisted Marines who attrited during advanced training.

Attrite 1 = first term enlisted Marines who attrited before completion of recruit training.

<sup>a</sup> Number of observations appears in parentheses below mean.

# APPENDIX 31

## CELL MEANS<sup>a</sup> ACROSS GROUPS AND PHASES FOR MARINE-CIVILIAN ROLE FORCE

GROUP	PHASE		
	I	II	IV
STAYER	19.01 (1044)	22.51 (849)	4.52 (355)
ATTRITE 3	20.66 (27)	21.97 (25)	-2.03 (18)
ATTRITE 2	16.72 (62)	18.86 (57)	
ATTRITE 1	5.14 (95)		

NOTE: Stayer = first term enlisted Marines as of 25 months completed service.

Attrite 3 = first term enlisted Marines who attrited during or after arrival at duty station.

Attrite 2 = first term enlisted Marines who attrited during advanced training.

Attrite 1 = first term enlisted Marines who attrited before completion of recruit training.

<sup>a</sup> Number of observations appears in parentheses below mean.

# APPENDIX 32

## CELL MEANS<sup>a</sup> ACROSS GROUPS AND PHASES FOR INTENTION TO COMPLETE ENLISTMENT

GROUP	PHASE		
	I	II	IV
STAYER	4.46 (1134)	4.57 (997)	4.30 (885)
ATTRITE 3	4.28 (32)	4.25 (32)	3.42 (31)
ATTRITE 2	4.31 (74)	4.42 (72)	
ATTRITE 1	3.73 (110)		

NOTE: Stayer = first term enlisted Marines as of 25 months completed service.

Attrite 3 = first term enlisted Marines who attrited during or after arrival at duty station.

Attrite 2 = first term enlisted Marines who attrited during advanced training.

Attrite 1 = first term enlisted Marines who attrited before completion of recruit training.

<sup>a</sup> Number of observations appears in parentheses below mean.

# APPENDIX 33

## CELL MEANS<sup>a</sup> ACROSS GROUPS AND PHASES FOR INTENTION TO RE-ENLIST

GROUP	PHASE		
	I	II	IV
STAYER	3.07 (1138)	3.21 (1001)	2.43 (489)
ATTRITE 3	3.00 (32)	3.34 (32)	1.97 (31)
ATTRITE 2	3.07 (73)	3.13 (72)	
ATTRITE 1	2.80 (110)		

NOTE: Stayer : first term enlisted Marines as of 25 months completed service.

Attrite 3 = first term enlisted Marines who attrited during or after arrival at duty station.

Attrite 2 : first term enlisted Marines who attrited during advanced training.

Attrite 1 = first term enlisted Marines who attrited before completion of recruit training.

<sup>a</sup> Number of observations appears in parentheses below mean.

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